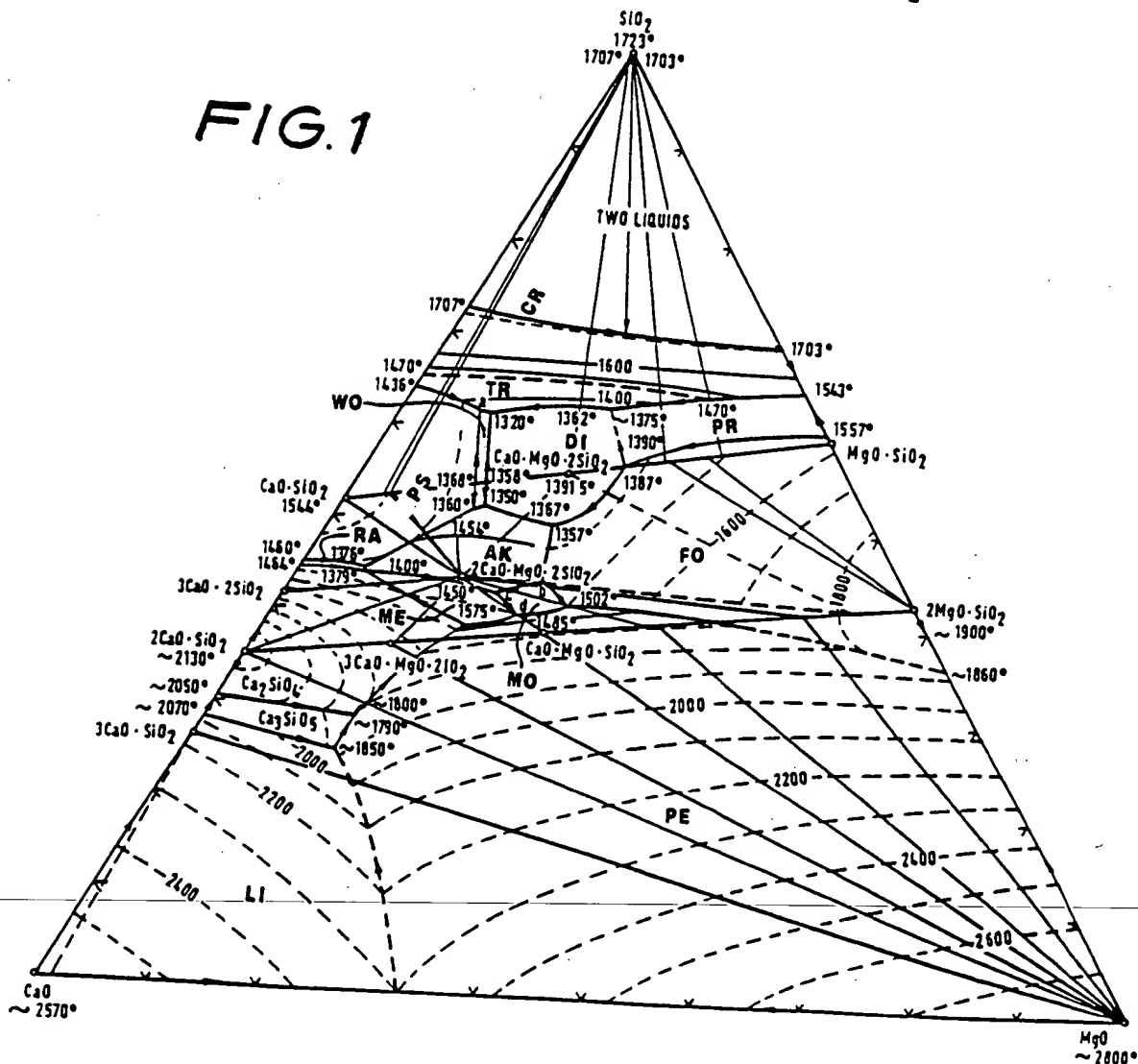


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CR }
TR } SiO_2
PS $\alpha - \text{CaO} \cdot \text{SiO}_2$
WO $\beta - (\text{CaMg})\text{O} \cdot \text{SiO}_2$
RA $3\text{CaO} \cdot 2\text{SiO}_2$
LI $(\text{CaMg})\text{O}$
PE MgO
FO $2(\text{Mg,Ca})\text{O} \cdot \text{SiO}_2$
PR $(\text{Mg,Ca})\text{O} \cdot \text{SiO}_2$
DI $(\text{Ca,Mg})\text{O} \cdot \text{MgO} \cdot 2\text{SiO}_2$
AK $2\text{CaO} \cdot \text{MgO} \cdot 2\text{SiO}_2$
ME $3\text{CaO} \cdot \text{MgO} \cdot 2\text{SiO}_2$
MO $(\text{Ca,Mg})\text{O} \cdot \text{MgO} \cdot \text{SiO}_2$

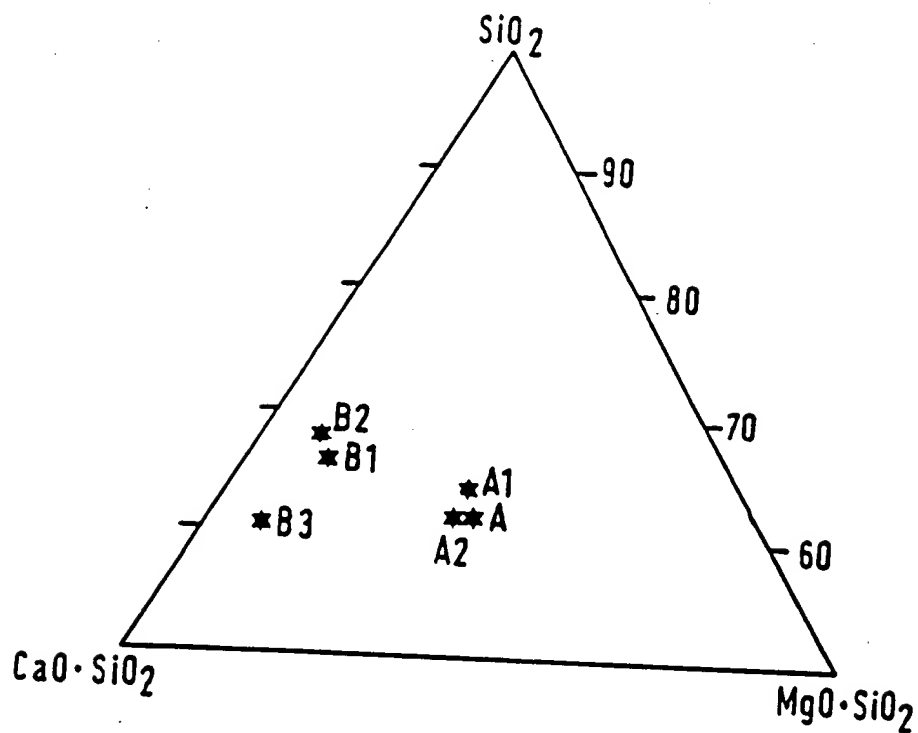
FIG. 1



APPROVED	O.G. FIG.	
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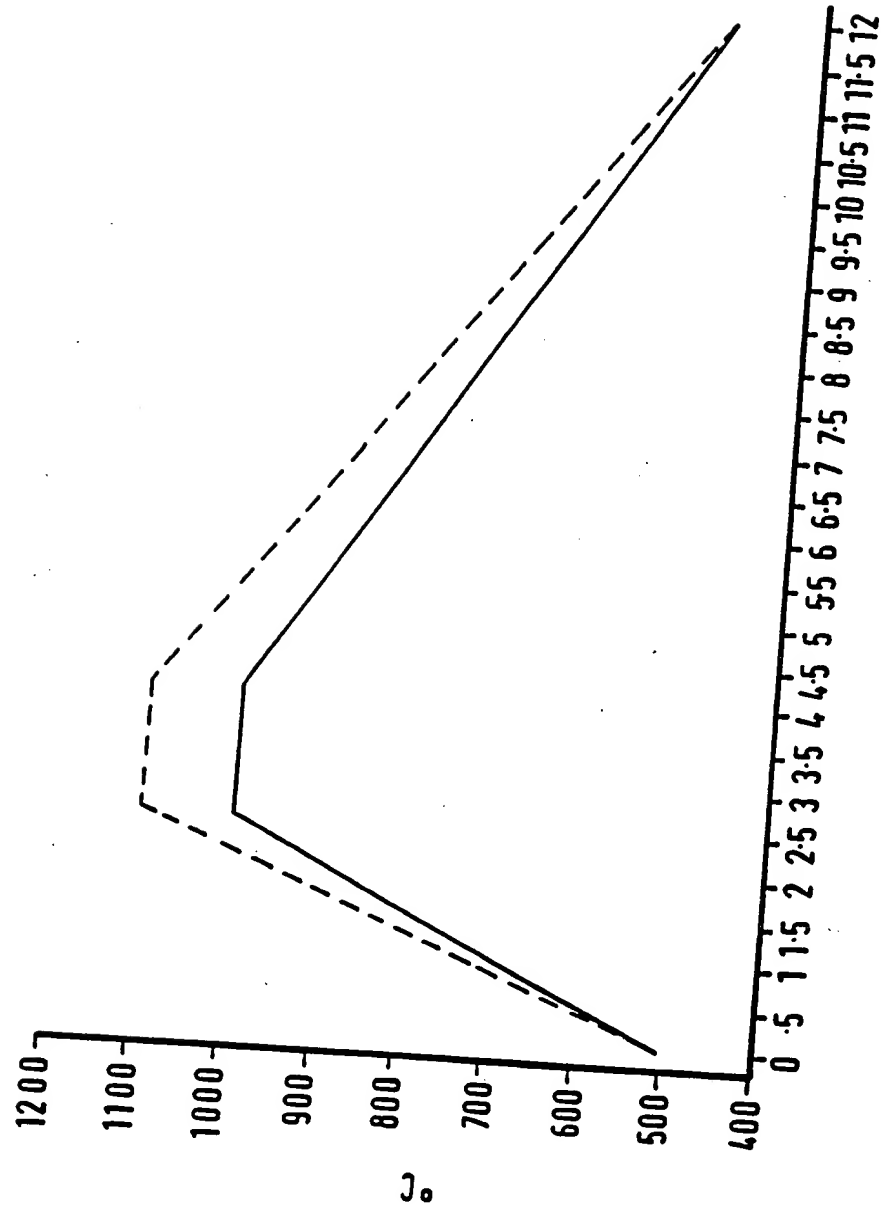
FIG. 2



APPROVED	O.G. FIG.	
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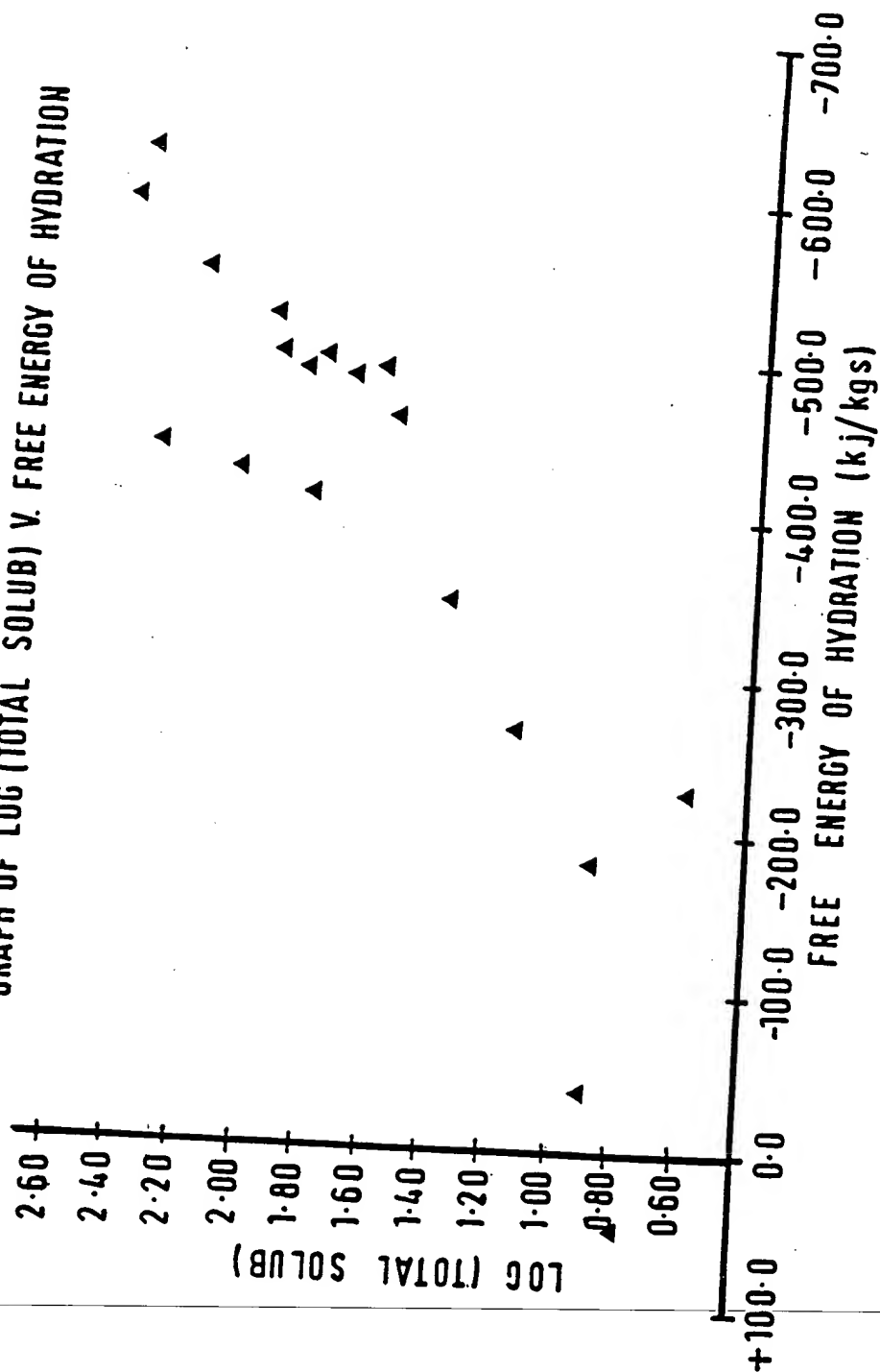
FIG. 3



APPROVED	O.G. FIG.	
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FIG. 4
GRAPH OF LOG (TOTAL SOLUB) V. FREE ENERGY OF HYDRATION

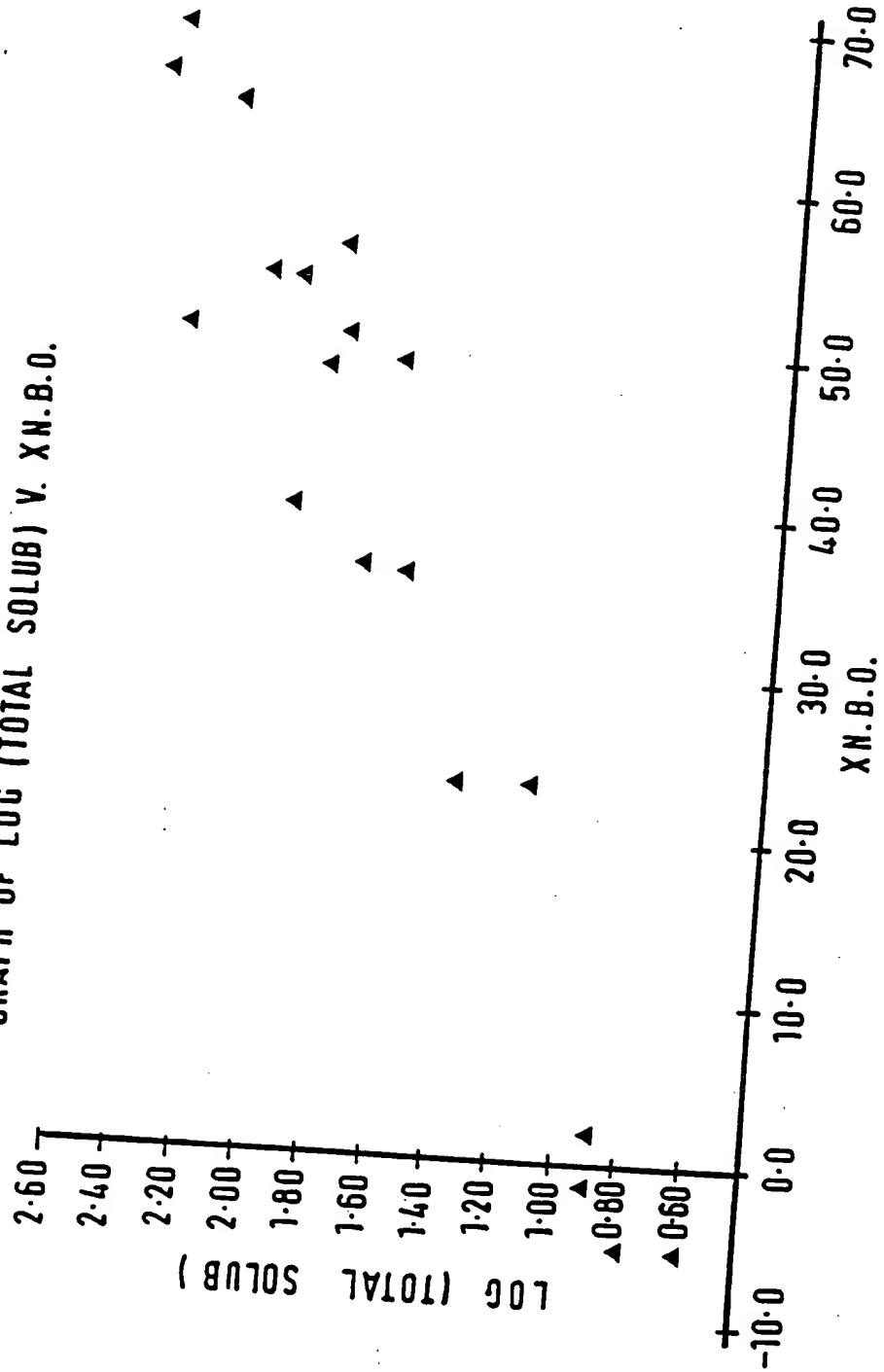


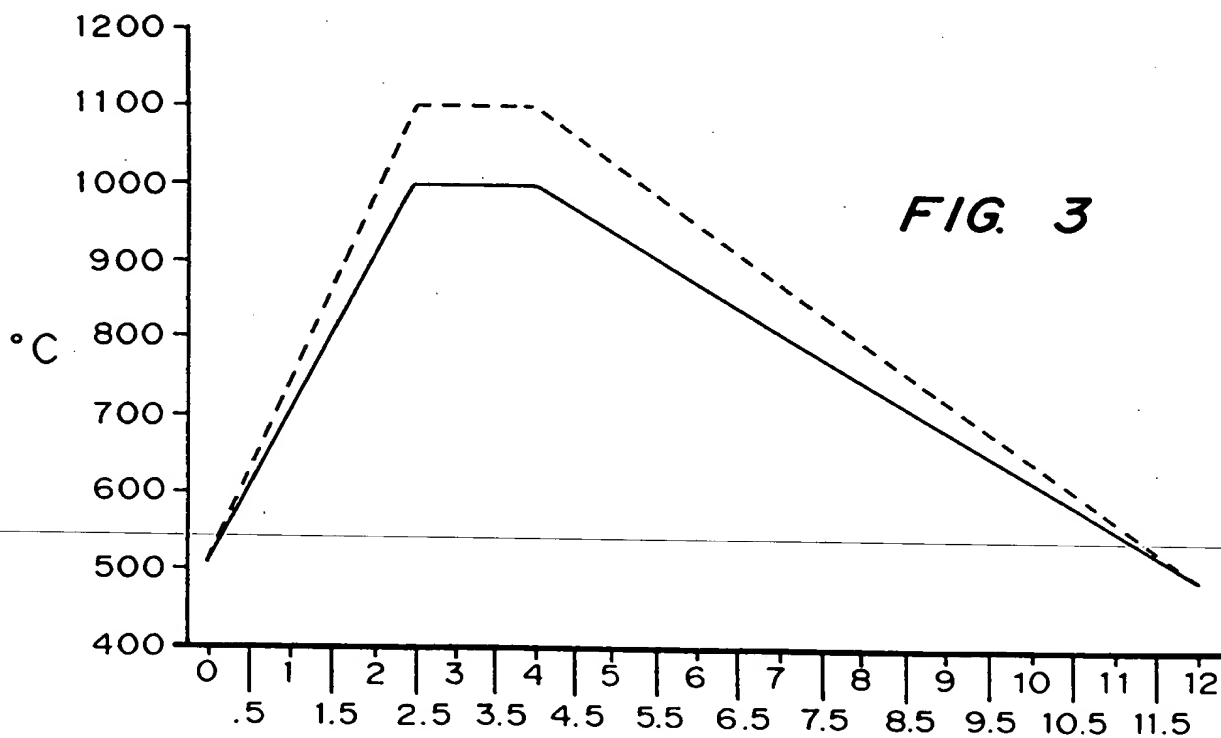
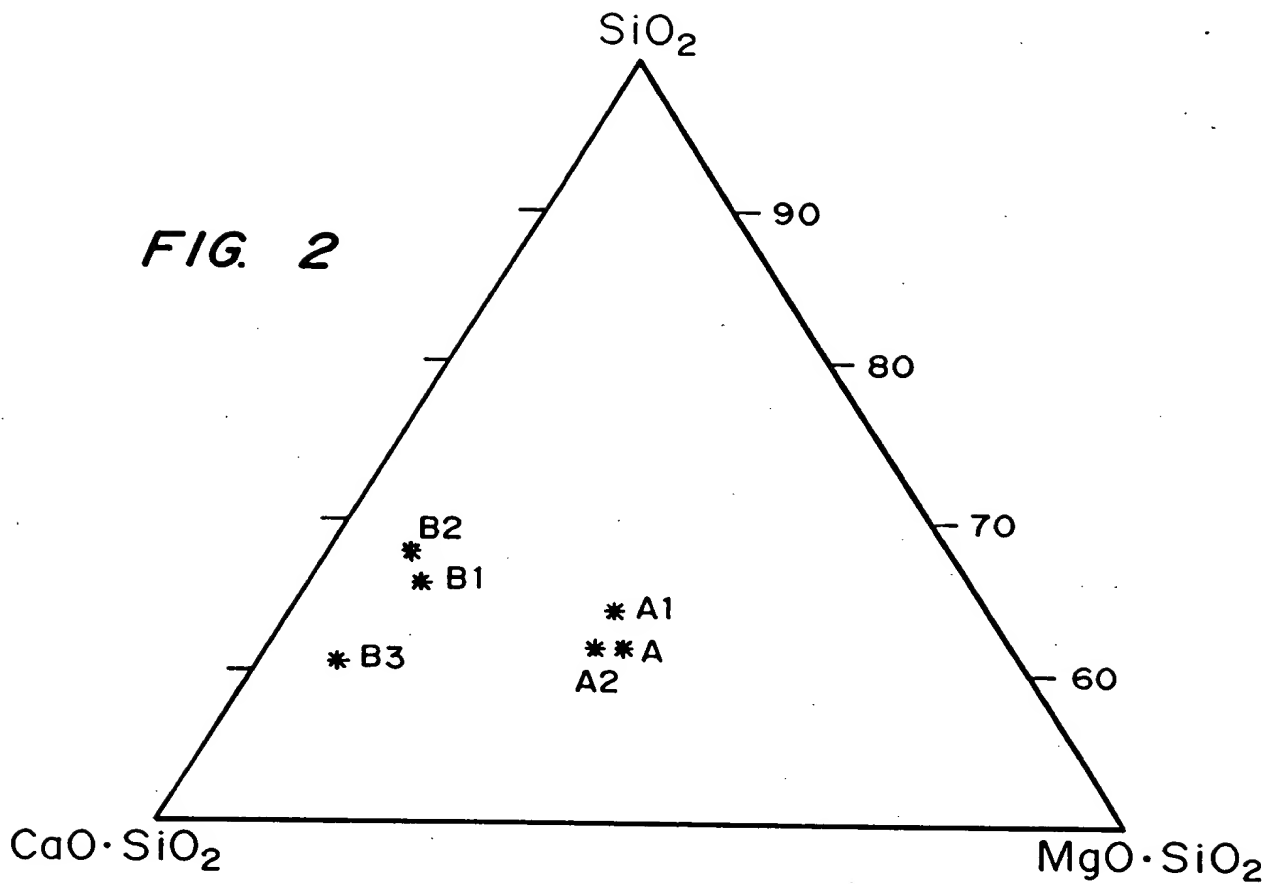
APPROVED	O.G. FIG.	
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FIG.5

GRAPH OF LOG (TOTAL SOLUB) V. XN.B.O.





A scatter plot showing the relationship between the logarithm of total solubility (LOG (TOTAL SOLUB)) on the y-axis and the free energy of hydration (Free Energy of Hydration (kj/kgs)) on the x-axis. The y-axis ranges from 0.60 to 2.60 with increments of 0.20. The x-axis ranges from +100.0 to -700.0 with increments of 100.0. The data points, represented by solid triangles, show a general upward trend as the free energy of hydration becomes more negative, indicating that more negative hydration energy is associated with higher solubility.

Free Energy of Hydration (kj/kgs)	LOG (TOTAL SOLUB)
+100.0	0.78
-50.0	0.88
-210.0	0.88
-170.0	0.58
-230.0	1.12
-340.0	1.35
-390.0	1.78
-410.0	2.02
-450.0	2.28
-460.0	1.52
-480.0	1.65
-490.0	1.58
-490.0	1.75
-500.0	1.82
-500.0	1.78
-520.0	1.92
-550.0	2.18
-600.0	2.38
-630.0	2.35

Scatter plot showing LOG (TOTAL SOLUB) versus XN. B. O. for polyisobutylene in benzene. The data points are represented by solid triangles. A horizontal line is drawn at LOG (TOTAL SOLUB) = 0.60.

XN. B. O.	LOG (TOTAL SOLUB)
-10.0	0.80
-5.0	0.90
0.0	0.90
23.0	1.10
23.0	1.35
35.0	1.55
35.0	1.68
40.0	1.90
48.0	1.80
48.0	1.58
50.0	2.25
50.0	1.75
53.0	2.00
53.0	1.90
55.0	1.78
65.0	2.12
67.0	2.35
70.0	2.30

FIG. 5

FIG. 1

